SIREDON WAGLER, 1830 (AMPHIBIA, CAUDATA): PROPOSED SUPPRESSION UNDER THE PLENARY POWERS. Z.N.(S.) 762

By Hobart M. Smith and Joseph A. Tihen (*Department of Zoology, University of Illinois, Urbana, Illinois, U.S.A.*)

Herpetologists have long been aware that the generic name *Ambystoma* Tschudi, 1838 (*Classification der Batrachier . . .* , a pre-print of an identical work appearing in *Mem. Soc. Sci. nat. Neuchâtel* 2 (1840) : 57, 92 ; type *Lacerta subviolacea* Barton, 1804 (*Trans. amer. Phil. Soc.* 6(1) : 109)=*Lacerta maculata* Shaw, 1802 (*Gen. Zool.* 3(1) : 304)) is antedated by *Siredon* Wagler, 1830 (*Syst. Amphib.* : 209, 210, type *Siredon axolotl* Wagler, 1830=*Gyrinus mexicanus* Shaw, 1789 (*Nat. Misc.* **9** : 343–4 ; also described in *Descr. Icon. Amph.* (2) : pl. 20, 1830)). E. R. Dunn and K. P. Schmidt, two of the leading herpetologists of the United States in the decades 1920–1950, were content (Smith, 1939, *Zool. Ser. Field Mus. nat. Hist.* **24** : 16–17) to regard the assemblage of species to which these names are referable as constituting two genera, primarily because fortuitously the earlier name *Siredon* falls with a small and relatively little-known group of Mexican species whereas the later name *Ambystoma* falls with the much larger and better-known group of species in the United States. The sole zoological justification for this solution was the supposed failure of species of *Siredon* normally to transform, and the capacity of all species of *Ambystoma* to transform at least under some natural conditions.

2. Tihen (1958, *Bull. Fla. State Mus.* 3(1) : 1–50, figs. 1–11) subsequently demonstrated that this grouping, adopted by most herpetologists during the past two decades, is zoologically unsound despite its nomenclatorial advantages. We hold that taxonomic arrangements should be dictated by zoological considerations, subject to conventional rules, and not by the vagaries of name priority, and that if an acknowledgedly useful name is endangered by application of the rule of priority the plenary powers of the International Commission on Zoological Nomenclature should be invoked to preserve that name in accordance with the procedure officially established by the International Code for handling such situations.

3. The name *Ambystoma* is clearly so well established by long usage that it would be a grave mistake indeed now to change that name. The Zoological Record for 1955, for example, includes 87 entries for various aspects of *Ambystoma* ; 42 of those entries pertain to experimental work, and the remainder pertain to taxonomy, life history, distribution and ecology. In the past 20 years, well over a thousand entries for this genus must exist and for preceding decades additional thousands must exist for *Ambystoma* and for the invalid emendation *Amblystoma* Agassiz, 1846 (*Nomen. Zool.* (Rept.) : 2), popular for a century in the experimental literature.

4. K. P. Schmidt was of the same opinion as ourselves, namely that *Ambystoma* should be preserved at any cost ; and he had submitted a petition in 1956 to the International Commission on Zoological Nomenclature requesting

suppression of *Siredon* in order to validate *Ambystoma*. Unaware of his petition we independently investigated the same problem, uncovering in the process several other names antedating *Ambystoma*. Since our petition embraces his and is considerably more inclusive, the Secretary of the Commission has recommended that our petition be advanced in lieu of Schmidt's petition.

5. First the date of publication of *Ambystoma* must be established. In Engelmann's Bibliotheca Historico-Naturalis the date of publication of Tschudi's work in which the generic name *Ambystoma* was first proposed is cited as 1838, and all herpetological compendia checked have accepted that date, some referring to the separate work (*Classification der Batrachier . . .*), others to the journal (*Mem. Soc. Sci. nat. Neuchâtel*). The indices of Sherborn and Neave, however, give the date of publication for the separate work as 1838, and that of the Journal in which the work appeared as 1840 (vol. 2 being for 1839 but not appearing until 1840). Finally, Schulze and Kükenthal's index gives only the date of publication for the journal, which is stated as 1839 (Volume for 1838). The date of publication of the journal is, in the present context, somewhat academic, however, since the Code recognizes preprints as acceptable as of the date of their publication, and, therefore, the date for *Ambystoma* Tschudi is properly 1838. That date should be cited only for the separate preprint ; the date for the journal article is apparently 1839 or 1840.

6. Data in support of these conclusions have very kindly been provided by Dr. Jean G. Baer of the Université de Neuchâtel, and Miss J. B. MacKenzie, Librarian of the Museum of Comparative Zoology of Harvard University. Pertinent excerpts from their letters follow, reproduced by permission.

7. Dr. Baer writes : " Tschudi's paper appears in the Mémoires of the Society that were published in the year 1839.

" His introduction, written in Paris, Jardin des Plantes, and sent to Agassiz, is dated 30 November, 1837.

"At the end of his paper, p. 99, an addendum is dated 24 January 1838, i.e. about one month before sailing for South America.

" In the volume of Memoires, at the end of the plates there is an 'Anhang ' of one page and a half, without pagination, written by Agassiz in German. It is dated 29 September 1839, and mentions the fact that Count Musignano passed through Neuchâtel from Freiburg in Breisgau, and that he paged through Tschudi's memoir. This might imply that it had been already published. On the other hand, Agassiz was entrusted with the proof reading and the corrections, most of the plates being lithographed in his own establishment.

" In the Nomenclator Zoologicus, Agassiz lists *Ambystoma* Tsch. 1838. In the index, published 2 years later, we find *Amblystoma* (V. *Ambystoma* Tsch.) Rep. and *Ambystoma* Tsch. Rept. et Ad. 1838 (*Amblystoma*).

"At the end of Vol. II of the Memoires, is found an obituary of de Chaillet the botanist who died on April 29, 1839. It was first read at a meeting on November 20, 1839. This can only indicate that the volume was published after this date.

" What I cannot discover, however, is whether reprints were available of Tschudi's paper before the whole volume was published and whether these were distributed by Agassiz during Tschudi's absence in South America. It might be worth while to find out if such a reprint is not to be found in the Agassiz library at Harvard because this is the only place where it must be if it exists.

" I would, therefore, conclude that the vol. II of the Memoires was published in 1839 and probably after November 20 of that year. The date 1838 given by Agassiz might very well have been that for the proofs—all the more so, that Tschudi mentions in the annex that Duméril and Bibron are about to publish an identical classification of Amphibia and he claims priority for the new genera that he has established."

8. Miss MacKenzie writes : " Reference is made to your letter of June 3, 1960, where you question the date of publication of the generic name 'Ambystoma ' proposed by J. J. Tschudi. We have in our library a preprint of ' Classification der Batrachier, mit Berucksichtigung der fossilen Thiere, dieser Abtheilung der Reptilien, von J. J. Tschudi. (Aus dem zweiten Bande der Mémoires de la Société des sciences naturelles de Neuchâtel besonders abgedruckt).' : The imprint is dated ' Neuchâtel, in der Buchdruckerei von Petitpierre, 1838 '.

" Perhaps this preprint did not have wide distribution but I have located copies in the British Museum of Natural History and the Zoological Society of London, Libraries ".

9. *Axolotus* Jarocki, 1822 (*Zoologiia* . . . , **3** (Gady i plazy) : 179) is the earliest generic name, known to us, based upon any species included in *Ambystoma* by Tihen (*op. cit.*) and other recent authors. In an accompanying petition (1961, *Bull. Zool. Nomencl.* **18** : 216) we selected, from the three species included by Jarocki, *Siren pisciformis* Shaw, 1802 (*Gen. Zool.* **3**(2) : 612, pl. 140) = *Gyrinus mexicanus* Shaw, 1789, as the type-species of *Axolotus*.

10. Next follows *Philhydrus* Brookes, 1828 (*Prodr. Syn. Anim. Brookesian Mus.* : 16), type-species by monotypy *Siren pisciformis* Shaw, 1802.

11. *Siredon* Wagler, 1830 (*Syst. Amph.* : 209, 210) follows, with type-species, by monotypy, *Siredon axolotl* Wagler, 1830 (cited as *Siredon axolotl* Cuvier but Cuvier does not actually use that name, rather simply the vernacular " axolotl ") = *Gyrinus mexicanus* Shaw, 1789.

12. *Phyllhydrus* Gray, 1831 (Griffith's *Cuvier's Anim. Kingd.* **9**, *Syn. Spec.* : 108) is perhaps derived from Brookes' genus, but since no mention is made of it Gray's name should not be considered an emendation of *Philhydrus* Brookes. Type-species, by monotypy, *Siren pisciformis* Shaw, 1802.

13. *Axolot* Bonaparte, 1831 (*Giorn. Arcad. Sci. Lett. Arti* **49** : 77) was established without species, but with reference to Cuvier (presumably 1807, in Humboldt, *Rec. Obs. Zool.* **1** : 93), whose description of the " axolotl " is by his own statement based upon the same species as *Gyrinus mexicanus* and *Siren pisciformis*. Accordingly we hereby designate *Siren pisciformis* Shaw, 1802, as the type-species of *Axolot* Bonaparte, 1831.

14. *Sirenodon* Wiegmann, 1832 (*in* Wiegmann and Ruthe, *Handb. Zool.* (ed. 2) : 204), if construed as available as indicated in some of the generic indices, is a senior synonym of *Ambystoma*, having as type-species *Siredon axolotl* Wagler, 1830. In the same work, on the same page, appears another synonym, *Stegoporus* Wiegmann, which as a substitute for *Siredon* has the same

type, namely, *Siredon axolotl* Wagler, 1830.

15. A number of erroneous emendations of these five generic names have appeared and are of no present concern but are available if *Ambystoma* were to be split. They are *Phylhydrus* Swainson, 1839 (*Hist. Classif. Fishes* **2** : 94), and *Phyllidrus* Agassiz, 1845 (*Nomencl. zool. Rept. Amph.* : 6) both *pro Phyllhydrus* Gray, 1831 ; *Axolotes* Owen, 1844 (*Ann. nat. Hist.* **14** : 23), type *Axolotes guttata* Owen, 1844 = *Gyrinus mexicanus* Shaw, 1789 ; and *Axolotus* Gray, 1850 (*Cat. Amph. Rept. Brit. Mus.* **2** : 49), attributed to Cuvier and Bibron but actually new as of that appearance, type *Gyrinus mexicanus* Shaw, 1789.

16. Curiously, all seven of the generic names, including emendations, antedating *Ambystoma* Tschudi, 1838, have as type the species *Ambystoma mexicanum* (Shaw, 1789). It might be construed that this species is not congeneric with *Lacerta subviolacea* Barton, 1804 (type of *Ambystoma*), but Tihen (*op. cit.*) has thoroughly and convincingly documented the view that, if *Ambystoma* were to be generically partitioned even to his subgeneric level, *mexicanum* and *maculatum* would fall into the same genus. Only if the groups of that subgenus were elevated to generic (or subgeneric) rank would separate generic (or subgeneric) names become necessary for *mexicanum* and *maculatum*. In such case, we point out that with the suppression of the names antedating *Ambystoma*, 1838, *Phylhydrus* Swainson, 1839, would be the earliest available name for the *mexicanum* group.

17. The family name AMBYSTOMATIDAE was first proposed, we believe, by Hallowell, 1856, *Proc. Acad. nat. Sci. Philad.* **8** : 11, in the form AMBYSTOMIDAE. This was corrected to AMBYSTOMATIDAE by Tihen, 1958 (*op. cit.* : 20), as is required by the rules for formation of the family name from the genitive plural stem (-stom . . . , -stomat . . .).

18. Accordingly we now ask the International Commission on Zoological Nomenclature :

(1) to use its plenary powers to suppress the following generic names for the purposes of the Law of Priority but not for those of the Law of Homonymy :—
   (a) *Axolotus* Jarocki, 1822 ; (b) *Philhydrus* Brookes, 1828 ;
   (c) *Siredon* Wagler, 1830 ; (d) *Phyllhydrus* Gray, 1831 ;
   (e) *Axolot* Bonaparte, 1831 ; (f) *Sirenodon* Wiegmann, 1832 ;
   (g) *Stegoporus* Wiegmann, 1832 ;

(2) to place the generic name *Ambystoma* Tschudi, 1838 (gender : neuter), type-species, by monotypy, *Lacerta subviolacea* Barton, 1804, on the Official List of Generic Names in Zoology ;

(3) to place the following specific names on the Official List of Specific Names in Zoology :—
   (a) *maculata* Shaw, 1802, as published in the binomen *Lacerta maculata* ;
   (b) *mexicanus* Shaw, 1789, as published in the binomen *Gyrinus mexicanus* ;

(4) to place the following generic names on the Official Index of Rejected and Invalid Generic Names in Zoology :

   - (a) the seven generic names suppressed under the plenary powers in (1) above;
   - (b) *Amblystoma* Agassiz, 1846 (an invalid emendation of *Ambystoma* Tschudi, 1838);

(5) to place the family name AMBYSTOMATIDAE (correction of AMBYSTOMIDAE) Hallowell, 1856 (type-genus *Ambystoma* Tschudi, 1838) on the Official List of Family-Group Names in Zoology.

(6) to place the family name AMBYSTOMIDAE Hallowell, 1856 (type-genus *Ambystoma* Tschudi, 1838) (an invalid original spelling for AMBYSTOMATIDAE) on the Official Index of Rejected and Invalid Family Group Names in Zoology.

COMMENTS ON THE PROPOSED USE OF THE PLENARY POWERS TO DESIGNATE A TYPE-SPECIES FOR THE NOMINAL GENUS *BLANKAARTIA* OUDEMANS, 1911. Z.N.(S.) 330.

(see volume 17, pages 301–312)

By D. A. Crossley, Jr. (*Health Physics Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee, U.S.A.*)

It is evident from the amount of material published that the Commission must take action. Aside from all interpretations of the Rules, I believe that less confusion will result if action outlined in Paragraph 24 (Alternative 21a) is taken by the Commission. In addition, I believe this action would be more consistent with the Rules. I have recently (1960) published a paper using the genus *Blankaartia* in the manner of Alternative 21a.

By Robert Domrow (*Queensland Institute of Medical Research, Brisbane, Institute for Medical Research, Kuala Lumpur, Malaya*)

In the matter of *Tragardhula* v. *Blankaartia*, I write to support alternative 21(b) as adopted by Drs. Evans and Southcott, whose views on *bequaerti* Mr. Womersley tells me he is prepared to accept. I believe the actions called for in paragraph 25 to be the logical answer to this vexed problem. They simply seek to give legal force to the clearly stated intentions of the authors of the two genera in question. I consider, with Col. Traub (paragraph 10), that the type of genus is a species rather than a name. This alternative is further bolstered by Mr. Womersley's lectotype designations (paragraph 17).

Alternative 21(a), adopted by Drs. Fuller, Wharton and Audy, seeks apparently to perpetuate an unhappy usage in their recent, admittedly useful checklists. However, as Fuller and Wharton admit (paragraph 9), the subject is esoteric, and there is no danger of confusion. I am unable, therefore, to support the reversal of the original author's intentions called for in paragraph 24.

APHIS LINNAEUS, 1758, ITS TYPE-SPECIES AND THE FAMILY-GROUP NAME DERIVED FROM IT (INSECTA, HEMIPTERA). Z.N.(S.) 881.

By W. E. China (*Assistant Secretary, International Commission on Zoological Nomenclature*)

The present case concerns proposals to use the Plenary Powers to designate a type-species for the nominal genus *Aphis* Linnaeus, 1758, and to place the family name APHIDIDAE, so spelt, on the Official List. The case was first submitted to the Commission in January 1949 by Professor F. C. Hottes of Grand Junction, Colorado, and was registered, on 10 January, 1949, as Z.N.(S.) 385. In dealing with it Mr. Francis Hemming found that it would not be possible to place the family-group name based upon the generic name *Aphis* Linnaeus on the Official List of Family-Group Names until a decision had been arrived at as to the form which should be adopted for it. Documents dealing with this aspect of the case were registered as Z.N.(S.) 881 and on Mr. Hemming's retirement the latter registered number was adopted for the file.

2. Professor Hottes in his original application pointed out that although Lamarck, 1801 (*Syst. Anim. sans Vertèbr.*, *Tabl. gen.* : 300) indicated *Aphis ulmi* Linnaeus as the type of the genus *Aphis* Linnaeus, 1758 (*Syst. Nat.* (ed. 10) **1** : 451) this species had not been accepted by aphid taxonomists who had universally recognised as the type-species *Aphis sambuci* Linnaeus, 1758 (*Syst. Nat.* (ed. 10) **1** : 451) which had been indicated by Latreille in [1802–1803] (*Hist. nat. gén. partic. Crust. Ins.* **3** : 264). Hottes requested the Commission to use the Plenary Powers to declare *Aphis sambuci* Linnaeus, 1758, the type of the genus *Aphis* and to place the generic and specific names on the Official Lists.

3. In his letter of acknowledgement Hemming pointed out that in 1924 in Opinion 79 the Commission ruled that Lamarck, 1801, is not to be accepted as a work fixing the type-species of genera. Nor was it possible to accept Latreille, [1802–1803], as having fixed the type validly by citing *A. sambuci* as an " exemple ".

4. On 1 April 1949 the Commission received from Dr. Hottes a fresh draft of the application. Here he brought forward Latreille's 1810 (*Consid. gén. Anim. Crust. Arachn. Ins.* : 421) citation of *Aphis millefolii* Fabricius as the type at the same time explaining its non-availability on the grounds that it was not an originally included species. Hottes showed that the first valid type-selection was by Curtis, 1835 (*Brit. Ent.* **12** : 577) who cited *Aphis tiliae* Linnaeus as the type-species. However, as stated by Hottes, great confusion would arise if this species were to be considered as the type of *Aphis* since it has not been placed in that genus for a hundred years or more. Hottes continued by saying that Westwood, 1840 (*Introd. mod. Classif. Ins.*, *Synops.* : 118) cited *Aphis rosae* Linnaeus as the type-species of the genus *Aphis* but this species is now generally considered to be the type of the genus *Macrosiphum* Passerini. Rondani, 1848 (*Nuovi Annali delle Scienze Naturali* (2)**9** : 34) also regarded *Aphis rosae* as the type-species. Passerini (1860, *Gli Afidi* : 28)

appears to be the first worker to designate *Aphis sambuci* Linnaeus as the type-species of *Aphis* but of course his designation was antedated by that of Curtis. Various invalid fixations by Oestlund, 1886 (*A. mali* Fabricius), Van der Goot, 1913 (*Aphis evonymi* Fabricius), Swain, 1919 (*Aphis rumicis* Linnaeus) etc. were quoted by Hottes but *Aphis sambuci* Linnaeus appears to be the species most generally supported, being accepted by Kirkaldy 1905, Del Guercio 1907, Wilson 1910, Baker 1920, Davidson 1927, Theobald 1927, Börner 1930 and Gillette & Palmer 1932. Hottes believed that great confusion would result if a species, other than one belonging to the genus *Aphis* as at present constituted, were to be considered the type of the nominal genus *Aphis*. He therefore requested the Commission to use its Plenary Powers to designate *Aphis sambuci* Linnaeus as type-species of the genus *Aphis* Linnaeus, 1758 and to place the generic name *Aphis* and the specific name *Aphis sambuci* on the Official Lists.

5. On 10 February 1954, Hemming wrote to Hottes explaining the long delay, due to various causes, in dealing with his *Aphis* case, and promising publication in the near future. On 5 December, Hemming wrote again to Hottes explaining that as a result of the Copenhagen Congress of Zoology it was now necessary to place the family-group names involved in a case on the Official List of Family-Group Names in Zoology and the invalid family-group names on the Official Index of Rejected and Invalid Family-Group Names in Zoology. As the family was known under various names especially APHIDAE and APHIDIDAE it would be necessary to decide which was of the greater merit. Hemming asked Hottes to supply a list of the various spellings of this name and an appreciation of the relative merits of the names APHIDAE and APHIDIDAE.

6. Hemming then wrote to Canon L. W. Grensted (Classical Adviser to the Commission) asking for his opinion of the linguistic merits of the spellings APHIDAE and APHIDIDAE. Professor Grensted drew attention to his writings on this subject in 1946 (*Ent. mon. Mag.* **82** : 34–35 and 246–247) and 1947 (*op. cit.* **83** : 141). Mr. F. Laing, aphidologist at the British Museum (Nat. Hist.) at that time, had also written on this subject (*op. cit.* **83** : 227). Canon Grensted expressed the view that the two forms are equally acceptable although he indicated a personal preference for the form APHIDAE. He considered that the question should be settled by the Commission. Hemming then sought the advice of Dr. W. J. Hall, C.M.G., as Director of the Commonwealth Institute of Entomology who would be able to advise as to the form of name most generally used in applied entomology. Dr. Hall stated that APHIDIDAE had been and was more widely used than either APHIDAE or APHIIDAE. Hemming wrote to Hottes on 9 December 1954 explaining the position and pointing out that the decision of the Commission would be certainly designed to validate majority usage rather than to enter into the niceties of linguistic requirements. Hottes replied that he was preparing an application to the Commission for settlement of the form of the family name based on *Aphis* and was making a list of the various spellings. This list was received in the Commission Office on 20 December 1954 and contained 43 references to the use of APHIDIDAE, 16 to APHIDAE and 2 to APHIIDAE as well as various obviously invalid spellings. Hottes application was not received until 5 March 1955.